REMARKS

Favorable reconsideration of this application, in light of the following discussion, is respectfully requested.

Claims 1, 5-9, 11, 12, 14-18, 20, and 21 are currently pending. No claims have been amended herewith.

In the outstanding Office Action, Claims 1, 12, and 21 were rejected on the ground of non-statutory obviousness-type double patenting as being unpatentable over claim 1 of U.S. Patent No. 6,770,116; Claim 21 was rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,090,187 to Kumagai (hereinafter "the '187 patent"); Claims 1, 7-9, 11, 12, 16-18, and 20 were rejected under 35 U.S.C. § 103(a) as being unpatentable over the '187 patent in view of JP Patent Application Publication No. 11-236813 to Ono et al. (hereinafter "the '813 application"); Claims 5 and 14 were rejected under 35 U.S.C. § 103(a) as being unpatentable over the '187 patent in view of the '813 application and U.S. Patent No. 5,732,554 to Sasaki et al. (hereinafter "the '554 patent"); and Claims 6 and 15 were rejected under 35 U.S.C. § 103(a) as being unpatentable over the '187 patent in view of the '813 application and U.S. Patent No. 5,853,459 to Kuwamoto et al. (hereinafter "the '459 patent").

Regarding the rejection of Claims 1, 12, and 21 on the ground of non-statutory obviousness-type double patenting, it is respectfully submitted that the rejection is overcome by the Terminal Disclaimer filed herein.

Previously presented Claim 21 is directed to an exhaust gas purification apparatus comprising:

> a casing;
>
> a filter accommodated in the casing and configured to remove particulates in an exhaust gas; and
>
> regenerating means for regenerating the filter by heating the filter,

> wherein the regenerating means preheats the filter with heat of the exhaust gas before regenerating the filter, and
>
> the regenerating means includes heating means for heating the filter to remove the particulates deposited in the filter, switching means for switching a flow of the exhaust gas, first temperature detecting means for detecting a temperature in the casing, second temperature detecting means for detecting a temperature of the exhaust gas, and processing means for making a comparison of the temperature in the casing with the temperature of the exhaust gas, operating the switching means based on the comparison and preheating the filter with the exhaust gas.

Regarding the rejection of Claim 21 under 35 U.S.C. § 102(e), the '187 patent is directed to an apparatus and method for removing particulates in exhaust gas of an internal combustion engine collected by an exhaust particulate remover apparatus. In particular, the '187 patent discusses that two filters, provided in an exhaust path of an internal combustion engine, are used to simultaneously collect particulates in an exhaust gas and are alternately refreshed.[1]

The outstanding Office Action cites exhaust temperature sensors 17 and exhaust gas pressure sensors 18, provided at the inlet and outlet sides of No. 1 and No. 2 filters 5a, for teaching the claimed first temperature detecting means and second temperature detecting means. Further, the outstanding Office Action cites the '187 ECU 1 including a single filter accumulation amount detection function for teaching the claimed processor.[2]

However, it is respectfully submitted that the '187 patent fails to disclose regenerating means including first temperature detecting means for detecting a temperature in the casing, second temperature detecting means for detecting a temperature of the exhaust gas, and processing means for making a comparison of the temperature in the casing with the temperature of the exhaust gas, operating the switching means based on the comparison and preheating the filter with the exhaust gas, as recited in Claim 21. Rather, the '187 patent

[1] See '187 patent, Abstract.
[2] See Office Action dated February 1, 2008, page 4.

discusses calculating the exhaust gas flow amount of the exhaust gas flowing into and out of the filter, based on detection values from the exhaust gas temperature sensors 17 and the exhaust gas pressure sensors 18 in the upstream side and the downstream side of the filter, and detecting a differential pressure (i.e., a pressure loss) between the upstream and downstream sides of the filter, thereby detecting an accumulation amount of particulate accumulated in the filter.[3] The '187 patent does not disclose comparing ***the temperature in the casing*** with ***the temperature of the exhaust gas***.

Further, the '187 patent discusses that the ECU 10 selects which of the No. 1 and No. 2 filters to refresh, based on determined accumulation amounts. For example, the '187 patent discusses that when the No. 1 filter is selected for refreshing, an electric heater for the No. 1 filter is rendered conductive for a predetermined time period, to heat and to generate a fire inside that filter. Thereafter, the '187 patent discusses that a control valve 8 is opened to introduce a part of an exhaust gas, as a reclaiming gas, from the pipe line presently collecting particulate into the No. 1 filter, so that particulate is burnt by transmitting fire.[4] The '187 patent does not disclose preheating the filter ***with the exhaust gas based on the comparison result***.

Thus, the '187 patent does not disclose the first temperature detecting means, the second temperature detecting means, and the processing means defined in Claim 21. Accordingly, Applicant respectfully traverses the rejection of Claim 21 as being anticipated by the '187 patent.

Previously presented Claim 1 is directed to an exhaust gas purification apparatus comprising:

a casing;

[3] See '187 patent, column 6, line 61 to column 7, line 2.
[4] Id. at column 7, lines 25-40.

> a honeycomb-like filter accommodated in the casing and comprising a porous silicon carbide sinter carrying an exhaust gas purification catalyst, the honeycomb-like filter being configured to remove particulates in an exhaust gas;
>
> a regeneration device configured to cause the honeycomb-like filter to be preheated with heat of the exhaust gas before regenerating the honeycomb-like filter; and
>
> a switch valve positioned downstream to the casing and configured to switch a flow of the exhaust gas,
>
> wherein the regeneration device comprises a first temperature detector configured to detect a temperature in the casing, a second temperature detector configured to detect a temperature of the exhaust gas, and a processor configured to make a comparison of the temperature in the casing with the temperature of the exhaust gas, open the switch valve based on the comparison and preheat the honeycomb-like filter with the exhaust gas.

Regarding the rejection of Claim 1 under 35 U.S.C. § 103(a), as noted above, the '187 patent fails to disclose the first temperature detecting means, the second temperature detecting means, and the processing means defined in Claim 21. Thus, the '187 patent fails to disclose the first temperature detector, the second temperature detector, and the processor defined in Claim 1. Further, it is respectfully submitted that the '813 application fails to remedy the deficiencies of the '187 patent, as discussed above. Moreover, the outstanding Office Action does not rely on the '813 application for teaching those deficiencies.

The '813 application is directed to a regeneration system for an exhaust gas purifying device. However, it is respectfully submitted that the '813 application fails to disclose a regeneration device comprising a first temperature detector configured to detect a temperature in the casing, a second temperature detector configured to detect a temperature of the exhaust gas, and a processor configured to make a comparison of the temperature in the casing with the temperature of the exhaust gas, open the switch valve based on the comparison and preheat the honeycomb-like filter with the exhaust gas. Rather, the '813 application discusses a regeneration system that regenerates the honeycomb filter 22 in the

exhaust gas purification apparatus 20 when a predetermined time elapses during running the diesel engine 10.[5] The '813 application does not disclose comparing ***the temperature in the casing*** with ***the temperature of the exhaust gas***, and preheating the filter ***with the exhaust gas based on the comparison result***.

Thus, no matter how the teachings of the '187 patent and the '813 application are combined, the combination does not teach or suggest the regeneration device comprising a first temperature detector configured to detect a temperature in the casing, a second temperature detector configured to detect a temperature of the exhaust gas, and a processor configured to make a comparison of the temperature in the casing with the temperature of the exhaust gas, open the switch valve based on the comparison and preheat the honeycomb-like filter with the exhaust gas, as defined in Claim 1. Accordingly, Applicant respectfully traverses the rejection of Claim 1 (and all associated dependent claims) as being unpatentable over the '187 patent and the '813 application.

Regarding the rejection of dependent Claims 5 and 14 under 35 U.S.C. § 103(a), it is respectfully submitted that the '554 patent fails to remedy the deficiencies of the '187 patent and the '813 application, as discussed above. Accordingly, it is respectfully submitted that dependent Claims 5 and 14 patentably define over any combination of the '187 patent, the '813 application, and the '554 patent.

Regarding the rejection of dependent Claims 6 and 15 under 35 U.S.C. § 103(a), it is respectfully submitted that the '459 patent fails to remedy the deficiencies of the '187 patent and the '813 application, as discussed above. Accordingly, it is respectfully submitted that dependent Claims 6 and 15 patentably define over any combination of the '187 patent, the '813 application, and the '459 patent.

[5] See '813 application, paragraph [0027].

Amended Claim 12 includes limitations analogous to the limitations recited in Claim 1 to the extent discussed above. Moreover, Claim 12 has been amended in a manner analogous to the amendments to Claim 1. Accordingly, for reasons analogous to the reasons stated above for the patentability of Claim 1, Applicant respectfully traverses the rejection of Claim 12 (and all associated dependent claims) as being unpatentable over the '187 patent and the '813 application.

Thus, it is respectfully submitted that independent Claims 1, 12, and 21 (and all associated dependent claims) patentably define over any combination of the '187 patent, '813 application, the '554 patent, and the '459 patent.

Consequently, in light of the above discussion, the outstanding grounds for rejection are believed to have been overcome. The application as amended herewith is believed to be in condition for formal allowance. An early and favorable action to that effect is respectfully requested.

Respectfully submitted,

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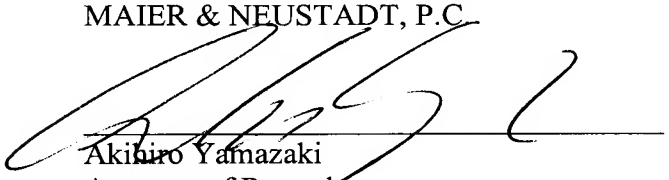
MAIER & NEUSTADT, P.C.



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